## **Nuptiality Levels and Trends in Botswana**

# Gobopamang Letamo,\* Kenabetsho Bainame,§ Motsholathebe Bowelo\*

#### **Abstract**

Nuptiality in Botswana like in other countries in the world is undergoing changes. The aim of this study is to examine emerging marriage patterns and trends in Botswana using population census data from 1971 to 2011. The study shows that fewer and fewer men and women who are eligible for marriage are getting married and the proportion of people who are cohabiting is on the increase. The percentage of the population married declined from 42.9% among women and 47.1% among men in 1971 to 17.9% and 18.8% respectively in 2011. The proportion of population who were unmarried increased from 37.0% among women and 44.0% among men to 53.4% and 58.1% respectively in the same period. These changes are attributed to the changing socio-economic conditions such as increasing levels of education and female participation in the labour force, urbanisation, modernisation and westernisation. In light of these changes, it is imperative that detailed studies are undertaken to have an in-depth understating of the causes and consequences of the changing nuptiality patterns in Botswana.

### Introduction

Marital status is of interest to a wide range of disciplines including demography, economics, sociology, and anthropology (Budlender, Chobokoane and Simelane 2004). Nuptiality, which refers to marriage, separation, divorce, widowhood and remarriage are not in themselves of particular interest to demographers (Newell 1988). The importance of nuptiality in the discipline of demography partly arises from its relationship with age at which sexual relations begin and end, and partly with the formation and dissolution of families and households (Newell 1988). For instance, marriage is an important proximate determinant of fertility (Adlaka and Kumar 1991) because it marks the beginning of exposure to the risk of childbearing for a woman, hence her age at first marriage. The frequency, characteristics and dissolution of marriage is important to measure fertility levels as most births tend to occur within some kind of union. There are many different forms of marriage such as formal, polygamous, consensual and marriage-type unions, for instance, cohabitation or visiting unions. The most commonly measured aspects of nuptiality are the rate and age at which this occurs, the characteristics of individuals involved and the rate of dissolution (for example divorce, separation and widowhood).

The United Nations in the recommendations for the 1980 round of censuses, suggested that the minimum categories of marital status recorded should be single (that is, never married), married, widowed, not married, divorced, to get married and remarried. It should be noted that the distinction between first marriages and remarriages is critical because fertility is primarily determined by the age at first marriage (Newell 1988).

Social scientists particularly demographers have long recognised age at marriage as one of the principal determinants of fertility. Numerous studies have demonstrated a strong negative relationship between age at marriage and fertility (Agarwala and Coale 1965; Audinarayana 1985; Bongaarts 1982; Wyon and Gardan 1971; and Zachariah 1983). For instance, it has been observed that early entry into marriage exposes women to the risks of early childbearing and may also impede improvements in their educational, economic and social status (Palamuleni 2010 and Letamo 1993). In societies where childbearing takes place within marriage, an increase in the age at marriage is likely to minimise first

<sup>\*</sup> Gobopamang Letamo, Department of Population Studies, University of Botswana. Email: gobopamangletamo@gmail.com

<sup>§</sup> Kenabetsho Bainame, Department of Population Studies, University of Botswana. Email: bainamek@gmail.com

<sup>\*</sup> Motsholathebe Bowelo, Department of Population Studies, University of Botswana.

births to teen mothers which is known to carry a higher risk of death for the mother and child (Hobcraft 1987).

According to Gaisie (1991) in Botswana and in nearly all African countries, births do occur outside formalised unions and most women of childbearing age who have never married still participate in reproduction. In fact, some studies have indicated that cohabiting unions have been on the rise and Botswana is among countries with the highest prevalence of such unions in sub-Saharan Africa (Pitso and Carmichael 2003; Mokomane 2005 and 2006).

This study examines levels, trends, and differentials in nuptiality in Botswana, a country which is one of three in Sub Saharan Africa that have been known over the years to be experiencing rapid fertility decline. For example, the total fertility rate has fallen remarkably since 1981 from 7.1 to 2.9 in 2007 (Central Statistics Office 2009). Adjusted or estimated fertility rates yield a large decline of between 20 and 24% (Gaisie 1991). In addition, the 1988 Botswana Family Health Survey (BFHS) showed that an increase in age at birth of one year was associated with a 27% reduction in fertility (Langeni-Mndebele 1997). Recent survey and census data in Botswana indicate trends towards later marriage and ever rising trend of singles who have never married before. This primary objective of this study is to examine emerging marriage patterns and trends in Botswana using the population census data from 1971 to 2011 with a view to inform evidence-based policy development and implementation.

### **Sources of Data**

The data used in this paper were drawn from the Botswana Population and Housing Census (PHC) for years 1971, 1981, 1991, 2001 and 2011. These sources of data contained population by age, sex and marital status. Evaluation of age and sex distributions has been done elsewhere by Bainame and Letamo. Therefore, we do not seek to assess the quality of data used. It suffices to mention that generally speaking, the age-sex data are of good quality and fairly acceptable.

## **Methods of Analysis**

First the data utilises some basic measures of marriage and divorce before and then contingency tables and percentages are used to estimate the proportion of the population that is single, married, divorced, separated and widowed. The timing of family formation used in this analysis was measured using the singulate mean at marriage (SMAM)which refers to the mean number of years spent in the single (never married) state by those in the hypothetical cohort who marry by the age of 50 (Hajnal 1953). The SMAM figures, apart from the 2011 census, were obtained from previous census reports and analysis.

#### **Results**

The results are organised as follows: a description of nuptiality levels and patterns, trends and differentials.

### Nuptiality Levels and Patterns

In order to get an understanding of the levels of marriage and divorce in Botswana the indices on marriage and divorce are presented in Table 1 below. The overall level of the crude marriage rate stands at 134 per 1000 which means that there were 134 marriages per 1000 population in Botswana at the time of census in 2011. While the number of divorces per 1000 population stood at 7. The data represent seemingly low marriage and divorce rates in the general population, there are variations in the marriage and divorce rates by sex. Males present higher levels of marriages and lower levels of divorce compared to their female counterparts. It should be noted here that the measures of marriage and divorce are affected by the population age structure and therefore should not be taken at face value lest we arrive at wrong conclusions. A further analysis of the data on marriage and divorce present

indices that are more refined and take note of the fact that it is not everybody who is at risk of marriage or divorce. The general marriage and divorce rates presented in Table 1 show that there were 198.9 marriages and 10.5 divorces per 1000 population reported in the 2011 PHC. Again it would appear from this measure that there are more marriages among males and fewer divorces as compared to their female counterparts. A more refined measure, which is the number of divorces per 1000 marriage persons, shows that of 1000 marriages 52.8 end in a divorce.

This index can be expressed as a percentage, and can be interpreted as overall 5.2% of marriages end in a divorce, while for females 6.6% and males 3.9% of marriages end in a divorce. In addition to this the total marriage rate (TMR), which uses the age specific marriages rates of persons 15 years and older, can also be used to show the total number of marriages a person will have at the end of his/her marriageable age if he/she follows the given schedule of marriage. As shown in Table 1, overall a person will have a total of 2.8 marriages by the end of his/her marriageable age if he/she conforms to the current schedule of marriage. The index on TMR also shows that the total number of marriages for females (3.4) and that of men (3.0) differ by 0.4, suggesting that women will have more marriages by the time they reach their marriageable age than men.

Table 1: Indices on Marriage and Divorce by sex, Botswana 2011

Measures of Marriage and Divorce	Males	Females	Total
Crude Marriage Rate	135.6	132.6	134.1
Crude Divorce Rate	5.3	8.8	7.1
General Marriage Rate	204.4	193.7	198.8
General Divorce Rate	7.9	12.9	10.5
Number of divorces per 1000 Married	38.8	66.4	52.8
Total Marriage Rate	3.0	3.4	2.8

Source: Statistics Botswana (2011)

Table 2 below presents a percent distribution of women and men aged 15 years and over by their current marital status. In this table, overall 19.4% of women reported to have been married at the time of the census compared with 20.5 percent of men. As expected the proportion married increases with increasing age for both men and women. The percentage of women who reported to be married in 2011 was consistently higher than that of men for ages from 20 to 39 years. A higher percentage of men aged between 40 and 44 and 45 to 49 years reported to be married compared to women in the same age range (also see Figure 1 below).

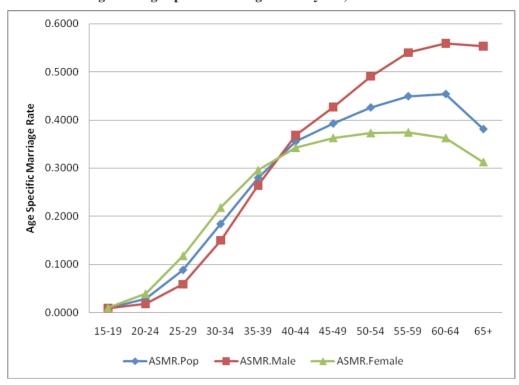


Figure 1: Age Specific Marriage Rates by Sex, Botswana 2011

Overall, 54.4% of men aged 15 years and over compared to 49.6% of women of the same age were never married. Generally, a higher proportion of men were never married up to the age group 35-39 years after which a higher proportion of women dominate the proportion of the never married. It can also be observed from table 2 that the percentage of women cohabiting with their partners in 2011 is similar to that of men. Cohabitation was more prevalent among women up to age group 25-29 following which more men than women were cohabiting.

Overall, the percentage of widowed women was 16.7% compared to 1.4% of men. A higher proportion of women than men were reported as either divorced or widowed. The proportion of women who were divorced was almost twice the proportion of men divorced.

Table 2: Percent distribution of men and women aged 15 years and over by current marital status, Botswana, 2011

A g e				Mo	en		
Group	Married	Never Married	Living to- gether	Separated	Divorced	Widowed	Total
15-19	.8	96.8	2.3	.0	.0	.0	104687
20-24	1.8	84.9	13.0	.1	.1	.1	96943
25-29	5.9	64.7	29.0	.2	.1	.1	100714
30-34	15.0	47.7	36.3	.4	.3	.3	84126
35-39	26.5	36.9	35.1	.4	.7	.4	68123
40-44	37.0	29.2	30.9	.6	1.3	1.1	48530
45-49	42.9	24.2	28.5	.8	1.8	1.8	37697
50-54	49.3	19.7	24.6	1.0	2.5	2.9	29582
55-59	54.2	15.9	21.5	1.2	3.1	4.1	24243
60-64	56.3	14.1	20.0	1.3	2.8	5.5	17229

65-69	58.6	12.9	16.8	1.4	2.9	7.4	12186
70-74	60.0	11.2	14.4	1.3	2.7	10.4	9430
75-79	61.9	10.0	12.5	1.2	2.5	12.0	6949
80-84	59.4	9.6	12.2	1.0	1.7	16.1	4870
85-89	54.9	10.7	10.8	.8	2.3	20.6	2824
90-94	52.8	10.3	9.2	.9	1.8	24.8	1373
95+	45.5	13.8	11.4	.6	1.3	27.3	841
Total	20.5	54.4	22.4	.4	.8	1.4	650347
				Woı	<b>ne</b> n		
15-19	.9	92.9	6.1	.0	.0	.0	105805
20-24	3.9	67.1	28.5	.3	.1	.1	102942
25-29	11.8	50.2	37.2	.3	.2	.2	106527
30-34	21.8	42.0	34.1	.5	.7	.8	85920
35-39	29.6	37.2	29.0	.6	1.4	2.1	66697
40-44	34.3	34.3	24.0	.7	2.4	4.2	50444
45-49	36.4	32.3	20.1	1.0	3.0	7.1	44289
50-54	37.4	31.0	15.0	1.3	3.8	11.4	36528
55-59	37.5	28.9	12.1	1.3	3.9	16.3	29622
60-64	36.4	26.1	9.1	1.3	3.4	23.6	20191
65-69	33.8	24.3	7.1	1.1	3.0	30.7	15460
70-74	30.0	21.7	5.3	.9	2.7	39.3	12781
75-79	24.7	20.5	4.2	.8	2.0	47.8	10911
80-84	20.0	18.1	3.3	.6	1.9	56.0	8341
85-89	17.4	17.0	3.0	.6	1.8	60.2	5422
90-94	16.3	15.9	2.1	.6	1.6	63.6	2542
95+	14.4	18.5	3.2	.4	1.5	61.9	1818
Total	19.4	49.6	22.5	.5	1.3	6.7	706240

### Nuptiality Trends

Table 2 shows trends in nuptiality rates. The percentage of married women declined from a high of 42.9% in 1971 to 19.4% in 2011. This trend was dramatic between 1981 and 1991 and 1991 and 2001. It remained virtually the same between 2001 and 2011. Among men the percentage married decreased from 47.1% in 1971 to 44.4% in 1981 and then plummeted to 29.0% in 1991. It then rose slightly from 17.1% in 2001 to 20.5% in 2011.

The proportion never married among women increased from 37.0% in 1971 to 44.5% in 1981 and to 49.5% in 1991. It then declined to 46.5% in 2001 and then rose to 49.6% in 2011 (also Figure 2). As regards men, the percentage never married rose from 44.0% in 1971 to 51.7% in 1981 and then to 54.8% in 1991. It also declined to 51.7% in 2001 and then rose to 54.4% in 2011.

100.0 90.0 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0 0.0 1971 1981 1991 2001 2011 ← Males ← Females

Figure 2: Trends in Respondents who reported to have Never Been Married, Botswana 1971-2011

Source: Republic of Botswana (1971, 1981, 1991, 2001) and Statistics Botswana (2011)

The proportion cohabiting increased from 12.0% in 1991 among women to 17.1% in 2001 and then to 22.5% in 2011. The percentage of cohabiting men also rose from 12.2% in 1991 to 16.8% in 2001 and then to 22.4% in 2011. The percentage of both widowed men and women declined over the years between 1971 and 2011. The percentages of divorced and separated combined decreased from 6.6% among men in 1971 to 1.8% in 2011. The largest decline was 3.3% points between 1971 and 1981. The proportion divorced and separated women decreased between 1971 and 2011 from 5.0% to 1.2%.

Table 3: Trends in the percentage distribution of women and men 15 years and over by current marital status, Botswana 1971- 2011

		Marital status								
Year	Never mar- ried	Married	Living to- gether	Widowed	Divorced/ Separated	Singulate Mean at Marriage (Years)				
			WOMEN							
1971	37.0	42.9	-	11.9	6.6	23.9				
1981	44.5	41.5	-	11.0	3.3	26.6				
1991	49.5	27.2	12.0	8.4	2.0	26.1				
2001	46.5	17.9	17.1	6.5	1.8	25.6				
2011	49.6	19.4	22.5	6.7	1.8	24.8				
			MEN			•				

1971	44.0	47.1	-	2.1	5.0	28.5
1981	51.7	44.4	-	1.8	2.1	29.9
1991	54.8	29.0	12.2	1.5	1.7	29.9
2001	51.7	17.1	16.8	1.3	1.2	29.7
2011	54.4	20.5	22.4	1.4	1.2	29.8

Source: Republic of Botswana (1995) and Statistics Botswana (2011)

It is also evident from Table 3 that the age at which men and women get married for the first is late. The SMAM for females was 23.9 years in 1971 and increased to 26.6 years in 1981. It remained fairly stable around 26 years until 2011 when it dropped to 24.8 years. The SMAM for males was 28.5 years in 1971 and slightly rose to 29.7 years in 2001 and has remained almost the same at 29.8 years.

## Nuptiality Differentials

Nuptiality differentials are shown in Tables 4, 5 and 6 below. From these tables it is evident that marital status varies by socio-economic characteristics. Overall, 57.5% of the population aged 15 years and over who had no religion were never married, followed by 51.7% of Christians and 40.1% of non-Christians. Comparatively, 91.5% of persons who have never attended school have never been married while 55.9% of those with secondary education and 39.9% with tertiary level education have never been married. Table 3 also shows that a higher percent of non-Christians (25.3%) respondents with tertiary level education (35.3%), those residing in towns and cities (23.2%) and those who were currently economically active (25.9%) were married. While on that the percentage of respondents with secondary level education (28.1%) and those who were economically active (28.1 percent) were living together.

Table 4: Percentage distribution of Population aged 15 years and above, according to religious affiliation, educational attainment, residence, economic activity and current marital status, Botswana 2011

Religious affiliation	Married	Never Married	Living together	S e p a - rated	D i - vorced	Wid- owed	Total
No religion	11.9	57.5	26.6	.4	.6	3.0	205536
Non-Christians	25.3	40.1	26.9	.8	1.4	5.4	76945
Christians	21.0	51.7	21.4	.5	1.1	4.3	1071383
Total	19.9	51.9	22.5	.5	1.1	4.2	1353864
Educational attainment							
Never attended	2.8	91.5	5.3	.1	.1	.2	212334
Non-formal	33.6	26.7	21.1	1.1	2.2	15.2	6446
Primary	26.9	36.8	24.9	.8	1.5	9.0	241593
Secondary	14.0	55.9	28.1	.4	.6	1.0	494711
Tertiary	35.3	39.9	21.0	.3	1.9	1.6	217707
Total	18.7	55.3	22.0	.4	1.0	2.7	1172791
Residence							
City/Town	23.2	51.0	22.4	.3	1.2	1.9	329180

Urban Village	19.1	56.1	19.1	.4	1.0	4.3	574237
Rural Village	18.5	47.2	26.9	.7	1.0	5.7	453170
Total	19.9	51.9	22.5	.5	1.1	4.2	1356587
E c o n o m i c activity							
Yes	25.9	41.6	28.1	.5	1.4	2.5	638352
No	14.6	61.1	17.5	.4	.8	5.6	718235
Total	19.9	51.9	22.5	.5	1.1	4.2	1356587

Table 5 and 6 show 27.1% of non-Christian women and 24.3% of non-Christian men reported themselves as married. The group with the least percentage of married people was that of respondents with no religious affiliation, with around 11% and 12% among women and men respectively. Among women, about 90% of respondents who have never attended school were never married, and 53.9% who were not economically active reported that they were never married. While another 53.8% of residents of urban villages and 51.6% of female respondents with no religion never married.

Table 5: Percentage distribution of women aged 15 years and above, according to religious affiliation, educational attainment, residence, economic activity and current marital status, Botswana 2011

Religious affili-	Married	Never	Living to-	Separated	Divorced	Widowed	Total
ation		Married	gether				
No religion	11.1	51.6	30.2	.5	.6	6.1	72060
Non-Christians	27.1	33.2	27.1	.8	1.6	10.1	28964
Christians	20.0	50.2	21.4	.5	1.3	6.6	604097
Total	19.3	49.6	22.5	.5	1.3	6.7	705121
Educational attainment							
Never attended	3.3	89.7	6.5	.1	.1	.3	108157
Non-formal	29.4	28.1	16.9	1.1	2.4	21.9	4001
Primary	26.7	33.7	22.7	.9	1.9	14.1	135658
Secondary	14.8	52.0	30.3	.4	.8	1.6	267099
Tertiary	34.2	41.1	19.3	.4	2.5	2.5	102636
Total	18.7	52.6	22.6	.5	1.2	4.4	617551
Residence							
City/Town	22.1	51.0	22.0	.3	1.5	3.0	167995
Urban Village	18.7	53.8	19.0	.5	1.2	6.7	314416
Rural Village	18.1	42.7	27.8	.8	1.2	9.4	223829
Total	19.4	49.6	22.5	.5	1.3	6.7	706240

Economic activity							
Yes	23.9	42.9	26.3	.6	1.9	4.3	276919
No	16.4	53.9	20.0	.5	.9	8.2	429321
Total	19.4	49.6	22.5	.5	1.3	6.7	706240

Among men 93.5% of respondents who had never attended school never married, 71.8% with no employment, 60.6% with no religion and 58.9 percent of residents of urban villages reported that they have never been married. Tables 4 and 5 further show that women with non-formal education (21.9%), 10.1% among non-Christians, 9.4% of rural residents and 8.25 of respondents with no economic activity reported that they were widowed. For men the figures show 4.3% of respondents with non-formal education were widowed, 2.6% of non-Christians, 2.0% of rural residents and 1.8% were not economically active.

Table 6: Percentage distribution of men aged 15 years and above, according to religious affiliation, educational attainment, residence, economic activity and current marital status, Botswana 2011

Religious af-	Married	Never	Living	Separated	Divorced	Widowed	Total
filiation		Married	together	•			
No religion	12.4	60.6	24.6	.4	.6	1.3	133476
Non-Chris- tians	24.3	44.3	26.9	.8	1.2	2.6	47981
Christians	22.4	53.7	21.3	.4	.8	1.4	467286
Total	20.5	54.4	22.4	.4	.8	1.4	648743
Educational attainment							
Never attended	2.2	93.5	4.1	.0	.1	.1	104177
Non-formal	40.4	24.3	28.1	1.1	1.8	4.3	2445
Primary	27.2	40.7	27.7	.7	1.1	2.5	105935
Secondary	13.1	60.4	25.4	.3	.5	.4	227612
Tertiary	36.3	38.7	22.5	.3	1.3	.8	115071
Total	18.7	58.2	21.3	.3	.7	.8	555240
Residence							
City/Town	24.3	51.0	22.8	.3	.8	.8	161185
Urban Vil- lage	19.6	58.9	19.1	.3	.7	1.3	259821
Rural Village	18.8	51.7	26.0	.6	.8	2.0	229341
Total	20.5	54.4	22.4	.4	.8	1.4	650347
E c o n o m i c activity							
Yes	27.4	40.5	29.4	.5	1.0	1.2	361433
No	11.8	71.8	13.6	.4	.6	1.8	288914
Total	20.5	54.4	22.4	.4	.8	1.4	650347

Source: Statistics Botswana (2011)

#### Discussion

The study investigated emerging marriage patterns and trends in Botswana using the population census data from 1971 to 2011. This study has found that marriage rates have fallen over time and that the percentage of women and men cohabiting is on the increase. Palamuleni (2010) observed a similar marriage pattern in South Africa. These changes in marriage patterns interact with changes in childbearing (Cancian and Reed 2009).

Declines in marriage are associated with declining fertility rates, which could partially explain why fertility decline has been sustained in Botswana. If marriage rates continue to decline in the country, fertility should be expected to continue to decline (Letamo 1996) assuming other variables are held constant.

Although childbearing begins early, marriage takes place later in life in Botswana, suggesting that childbearing occurs outside the institution of marriage. Amoteng (2004) observed that in South Africa nearly two-thirds of all births occur to married women, implying that about a third of childbearing occurs outside marriage. Letamo (1996) observed that the reported age at first birth in Botswana to be around 18 years. The SMAM indicates that marriage in Botswana occurs rather late compared to other countries in Sub-Saharan Africa apart from South Africa.

This study also observed an increase in cohabitation. These results are consistent with other studies (Palamuleni 2010; Stokes and Raley 2008) where the same phenomenon has been observed. In attempting to understand the causes and consequences of the rise in cohabitation, scholars have tried to identify whether cohabitation is an alternative to marriage, a prelude to marriage, or a convenient dating arrangement (Stokes and Raley 2008). It is suggested that premarital childbearing is a prelude rather than an alternative to marriage in Botswana (Mokomane 2006). Some of the reasons advanced for cohabitation include labour migration, decline in polygyny, better educated women, and enhanced legal rights of unmarried women (World Bank 2010).

Changing marriage patterns could be associated with various changing social and economic conditions taking place in Botswana. Increasing educational and career opportunities for young women, urbanisation and modernisation and a greater participation of women in the labour force have a role in the changing marriage patterns and will continue to do so in the future (Palamuleni 2010). Because childbearing is not restricted to married women the age at first birth is a better determinant of fertility in Botswana than age at marriage (Gaisie 1995; Langeni-Mndebele1997;Letamo and Letamo 2002). Better female education is associated with lower fertility because educated women are more likely to delay age at first birth, use contraceptives, and have lower ideal family size. Botswana is one of the few countries where more females are educated than males (World Bank 2010).

Urbanisation and modernisation have led to the separation of married couples from each other owing to wage labour employment. The concentration of modern economic activities in urban centres has necessitated that job seekers migrate to the urban areas in search of greener pastures and more often than not leading to the separation of couples. This separation gives each partner an opportunity to engage in behaviours that may not have arisen had the other partner been around. The temptation is to start a new sexual relationship at the new place of destination that may compromise the existing marriage. The end result may be dissolution of the existing marriage leading to increasing proportions of people who are not married. Thus urbanisation and modernisation can influence marriage patterns over time. Sometimes people opt for cohabitation rather than a new marriage.

These days premarital childbearing may not necessarily be a prelude but an alternative to marriage in Botswana as women become more empowered. The decision to have children outside of marriage may reflect women's increasing ability to support a family independently or the short supply of men with family-supporting earnings as argued by Cancian and Reed (2009).

#### Conclusion

It is imperative that detailed studies are undertaken to investigate factors promoting cohabitation, premarital childbearing and reasons for declining marriage rates. These studies should investigate nuptiality transitions occurring in the country and produce policy-relevant research results that can be used for evidence-based policy formulation and implementation. At the moment some of the conclusions made are inconclusive because of lack of detailed studies. On the basis of existing evidence some tentative policy-relevant implications of changing nuptiality regime can be made.

Since the prevalence of cohabitation is becoming a major trend of Botswana families, programmes targeted at enhancing the economic opportunities of these families need to be incorporated into the national plans. Childcare for single mothers is also necessary to reduce the socio-economic burden on these new family forms because single mother families are about 5 times as likely to be poor as married-parent families (Cancian and Reed 2009).

Because changes in marriage patterns interact with changes in childbearing, declining marriage rates are likely to perpetuate the decline in fertility in the country. In order to maintain total fertility rate at 3 children per woman as proposed by the Revised National Population Policy of 2010, it is imperative to address causes of change marriage patterns in the country. This should be done with the understanding that the decision to have children outside of marriage may reflect women's increasing ability to support a family independently or the short supply of men with family-supporting earnings (Cancian and Reed 2009).

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